UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

ECOLOGICAL SITE DESCRIPTION

ECOLOGICAL SITE CHARACTERISTICS

Site Type: Rangeland

Site ID: R036XA014NM

Site Name: Shallow Loam

Precipitation or Climate Zone: 9 to 14 inches

Phase:

PHYSIOGRAPHIC FEATURES

Narrative:

This site occurs on foothills, low ridges and benches on the west side of the subresource area. It is often just below the ponderosa pine zone where there is no pinyon-juniper woodland. It is also located on the toe slopes of the San Antonio Mountains. Slopes range from 1 to 10 percent. Elevation ranges from 8,000 8,700 feet above sea level.

Land Form:

1. Ridge
2.
3.

Aspect:

1. West
2.
3.

	Minimum	Maximum
Elevation (feet)	8,000	8,700
Slope (percent)	1	10
Water Table Depth (inches)	N/A	N/A

Flooding:	**Minimum**	**Maximum**
Frequency	N/A	N/A
Duration	N/A	N/A

Ponding:	**Minimum**	**Maximum**
Depth (inches)	N/A	N/A
Frequency	N/A	N/A
Duration	N/A	N/A

Runoff Class:

Negligible to medium.

CLIMATIC FEATURES

Narrative:

Mean annual precipitation varies from 9 to 14 inches. Deviations of 4 inches or more are quite common. Approximately 60 percent of the precipitation is received during the native plant growth period, April through September. During July, August and September 4 to 6 inches of precipitation influence the presence and production of warm-season plants. Fall and spring moisture is conducive to the growth of cool-season herbaceous plants. Maximum shrub growth also occurs during this time. Summer precipitation is characterized by brief, localized thunderstorms. Winter moisture usually occurs as snow or light rain.

Mean annual temperature varies from 64 degrees F in July to 21 degrees F in January. The maximum is near 100 degrees F. The minimum is near 40 degrees F. The average last killing frost in the spring is around mid-May. The first killing frost in the fall is late September or early October. The frost-free period is approximately 120 to 140 days, but freezing temperatures have been recorded for every month except July and August. Temperatures are generally conducive for herbaceous plant growth from April through September.

Wind velocities are relatively light most of the year with stronger winds occurring in spring and early summer. These stronger winds, which may exceed 25 miles per hour, increase transpiration rates of plants and rapidly dry the soil surface. Also, small soil particles are often displaced by the stronger winds, which can result in structural damage to native plants, particularly young seedlings.

Climate data was obtained from the WCCR web site. Using 50% probabilities for freeze-free and frost-free seasons at 28.5 degrees F and 32.5 degrees F respectively.

	Minimum	**Maximum**
Frost-free period (days):	104	119
Freeze-free period (days):	134	145
Mean annual precipitation (inches):	9	14

Monthly moisture (inches) and temperature (^{0}F) distribution:

	Precip. Min.	Precip. Max.	Temp. Min.	Temp. Max.
January	.52	1.79	7.6	45.6
February	.43	1.56	10.7	50.4
March	.67	1.92	16.8	56.8
April	.52	1.26	22.7	66.0
May	.62	1.26	28.8	75.5
June	.49	1.21	35.1	85.8
July	1.54	3.41	42.1	88.9
August	1.86	3.72	41.8	85.8
September	1.08	1.86	34,6	78.8
October	1.01	1.86	25.3	68.8
November	.71	1.60	16.2	56.0
December	.56	1.49	9.3	47.0

Climate Stations:

				Period			
Station ID	292241	Location	Cuba, NM	From:	01/01/14	To:	12/31/01
Station ID	293422	Location	Gallup FAA AP, NM	From:	01/01/21	To:	12/31/01

INFLUENCING WATER FEATURES

Narrative:

This site is not influenced by water from a wetland or stream.

Wetland description:

System	Subsystem	Class
N/A		

If Riverine Wetland System enter Rosgen Stream Type:

N/A

REPRESENTATIVE SOIL FEATURES

Narrative:

The subsoils of this site are such textures that shrub roots do not penetrate. This causes the plant community to react as though it were a shallow soil. The surface soil is a clay loam that is well drained. They formed in material weathered from basalt and eolian materials. These soils have a moderately slow permeability, and the available water-holding capacity is low to moderate.

Parent Material Kind: Alluvium

Parent Material Origin: Mixed

Surface Texture:

1. Clay loam
2.

Surface Texture Modifier:

1. N/A
2.
3.

Subsurface Texture Group: Loamy

Surface Fragments <=3" (% Cover): N/A

Surface Fragments >3" (% Cover): N/A

Subsurface Fragments <=3" (%Volume): N/A

Subsurface Fragments >=3" (%Volume): N/A

	Minimum	**Maximum**
Drainage Class:	Well	Well
Permeability Class:	Slow	Moderately slow
Depth (inches):	10	20
Electrical Conductivity (mmhos/cm):	Unknown	Unknown
Sodium Absorption Ratio:	Unknown	Unknown
Soil Reaction (1:1 Water):	Unknown	Unknown
Soil Reaction (0.1M CaCl2):	Unknown	Unknown
Available Water Capacity (inches):	3	9
Calcium Carbonate Equivalent (percent):	Unknown	Unknown

PLANT COMMUNITIES

Ecological Dynamics of the Site:

Plant Communities and Transitional Pathways (diagram)

Plant Community Name: Historic Climax Plant Community

Plant Community Sequence Number: 1 **Narrative Label**: HCPC

Plant Community Narrative: Historic Climax Plant Community
This shrub-grassland site is characterized by black sagebrush and western wheatgrass with other grasses and shrubs scattered about.

Canopy Cover:	
Trees, shrubs and half-shrubs	30 %
Ground Cover (Aveage Percent of Surface Area).	
Grasses & Forbs	20
Bare ground	60
Surface gravel	10
Surface cobble and stone	0
Litter (percent)	10
Litter (average depth in cm.)	1

Plant Community Annual Production (by plant type):

Annual Production (lbs/ac)

Plant Type	Low	RV	High
Grass/Grasslike	280	420	560
Forb	30	53	70
Tree/Shrub/Vine	30	53	70
Lichen			
Moss			
Microbiotic Crusts			
Total	350	525	700

Plant Community Composition and Group Annual Production: Plant species are grouped by annual production **not** by functional groups.

Plant Type - Grass/Grasslike

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
1	PASM	Western Wheatgrass	158 – 184	158 – 184
2	BOGR2	Blue Grama	16 – 42	16 – 42
3	BOCU	Sideoats Grama	26 – 53	26 – 53
4	KOMA ELEL5	Prairie Junegrass Bottlebrush Squirreltail	42 – 63	42 – 63
5	FEAR2 HECO17 2GRAM	Arizona Fescue Needleandthread Other Grasses	11 – 32	11 – 32

Plant Type - Forb

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
6	ASTER ERIOG PENST	Aster spp. Wildbuckwheat spp. Penstemon spp.	16 – 32	16 – 32
7	GILIA CACO17	Gilia spp. Indian Paintbrush	11 – 26	11 – 26
8	SPCO	Scarlet Globemallow	11 – 21	11 – 21
9	HYRI	Pingue	5 – 16	5 – 16
10	2FP	Other Perennial Forbs	16 – 32	16 – 32

Plant Type – Tree/Shrub/Vine

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
11	ARNO4	Black Sagebrush	79 – 105	79 – 105
12	ERICA	Rabbitbrush spp.	5 – 11	5 – 11
13	RIMO	Gooseberry (currant)	11 – 26	11 – 26
14	2SD	Other Shrubs	16 – 32	16 – 32

Plant Type - Lichen

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Plant Type - Moss

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Plant Type - Microbiotic Crusts

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Other species that could appear include: muttongrass, threeawn spp., fleabane, fourwing saltbush and winterfat.

Plant Growth Curves

Growth Curve ID **0014NM**

Growth Curve Name: **HCPC**

Growth Curve Description: **Shrub-grassland.**

Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
0	0	3	5	10	10	25	30	12	5	0	0

ECOLOGICAL SITE INTERPRETATIONS

Animal Community:

Habitat for Wildlife:

This site provides habitats, which support a resident animal community that is characterized by pronghorn antelope, white-tailed, jackrabbit, western harvest mouse and prairie lark. These sites furnish important foraging areas for pronghorn in the fall and winter. If located adjacent to forest cover, these sites are seasonally used by mule deer and elk.

Hydrology Functions:

The runoff curve numbers are determined by field investigations using hydrologic cover conditions and hydrologic soil groups.

Hydrologic Interpretations	
Soil Series	Hydrologic Group
Antonio	?

Recreational Uses:

There is fair opportunity for plant and animal study. There is also some opportunity for hunting and photography. Brush, forbs and grass present a variety of color and form on this site.

Wood Products:

This site produces no significant wood products in its potential plant community.

Other Products:

Grazing:

Approximately 75 percent of the vegetative production on this site are suitable for grazing or browsing by domestic livestock and wildlife. Grazing distribution is generally not a problem if adequate watering are provided. Continuous grazing, which allows repetitive grazing of the desirable species, eventually leads to a decrease in these species from the plant community. Such deterioration is indicated by a decrease in western wheatgrass, sideoats grama, prairie junegrass, Arizona fescue, and needleandthread. Species that increase includes blue grama, rabbitbrush, and black sagebrush will continue to dominate the site following severe deterioration. A planned system with periodic deferment is best to maintain the desirable balance between plant species and to maintain high productivity.

This site is susceptible to trampling damage when the soils are very wet.

Other Information:

Guide to Suggested Initial Stocking Rate Acres per Animal Unit Month

Similarity Index	Ac/AUM
100 - 76	4.6 – 6.2
75 – 51	6.1 – 9.3
50 – 26	9.1 – 18.5
25 – 0	18.5+

Plant Part	Code	Species Preference	Code
Stems	**S**	**None Selected**	**NS**
Leaves	**L**	**Preferred**	**P**
Flowers	**F**	**Desirable**	**D**
Fruits/Seeds	**F/S**	**Undesirable**	**U**
Entire Plant	**EP**	**Not Consumed**	**NC**
Underground Parts	**UP**	**Emergency**	**E**
		Toxic	**T**

Plant Preference by Animal Kind:

Animal Kind: Livestock
Animal Type: Cattle

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D
Western Wheatgrass	Pascopyrum smithii	EP	D	D	P	P	P	D	D	D	D	D	D	D
Sideoats Grama	Bouteloua curtipendula	EP	P	P	P	P	P	P	P	P	P	P	P	P
Prairie Junegrass	Koeleria macrantha	EP	D	D	D	D	D	D	D	D	D	D	D	D
Arizona Fescue	Festuca arizonica	EP	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
Needleandthread	Hesperostipa comata	EP	D	D	P	P	P	D	D	D	D	D	D	D

SUPPORTING INFORMATION

Associated sites:

Site Name	Site ID	Site Narrative

Similar sites:

Site Name	Site ID	Site Narrative

State Correlation:

This site has been correlated with the following sites:

Inventory Data References:

Data Source	# of Records	Sample Period	State	County

Type Locality:

State: **New Mexico**

County: **Taos**

Latitude:

Longitude:

Township:

Range:

Section:

Is the type locality sensitive? **Yes** ☐ **No** ☐

General Legal Description:

Relationship to Other Established Classifications:

Other References:

Data collection for this site was done in conjunction with the progressive soil surveys within the New Mexico and Arizona Plateaus and Mesas 36 Major Land Resource Area of New Mexico. This site has been mapped and correlated with soils in the following soil surveys: McKinley & Sandoval

Characteristic Soils Are:	
Antonio	
Other Soils included are:	

Site Description Approval:

{PRIVATE}Author	Date	Approval	Date
Don Sylvester		Don Sylvester	

Site Description Revision:

{PRIVATE}Author	Date	Approval	Date
Elizabeth Wright	08/15/02	George Chavez	09/11/02